

## PROJECT DESCRIPTION

## I. GENERAL

This project involves the reconstruction of an existing span wire Traffic Control Signal with interconnect at the intersection of MD 119 (Great Seneca Hwy) and Muddy Branch Road in Montgomery County. The existing 50-pair interconnect cable from Sam EIG Hwy and from Kentlands Blvd shall be rerouted thru proposed conduit to the proposed splice box. A new 12-pair cable shall then be routed from the splice box to the new base mounted controller. Video detection shall be used for all directions. MD 119 (Great Seneca Hwy) is assumed to run on north-south direction.

## II. INTERSECTION OPERATION

- The intersection is to operate in a NEMA eight-phase, semi-actuated mode, with the MD 119 (Great Seneca Hwy) approaches running concurrently. Exclusive left turn phases shall be provided for both approaches of MD 119 (Great Seneca Hwy). Pedestrian phases with pushbutton actuation shall be provided across both legs of MD 119 (Great Seneca Hwy). The pedestrian phase across east leg of Muddy Branch Road shall be on recall. Exclusive left turn phases shall be provided for both approaches of Muddy Branch Road. The Muddy Branch Road approaches shall also run concurrently.
- A full-traffic-actuated, eight-phase controller with L.A.U. and L.A.U. Panel and all necessary equipment housed in a NEMA size "6" base-mounted cabinet shall be installed at this intersection.

## III. SPECIAL NOTES

- The Contractor shall be responsible for terminating all signal cables, excluding interconnect, to the appropriate terminals and shall properly label each cable.
- Disconnecting and splicing of interconnect cable shall be performed by Montgomery County Forces. The contractor shall run the interconnect cable into the base of each cabinet and properly tag the cable. Contact Mr. Bob Gonzales at (240) 777-8761 seventy-two hours in advance of intended work.
- All underground and overhead utilities shown on these plans are schematic only and may not be complete. The Contractor shall be responsible for notifying Miss Utility prior to construction so that all utilities may be located in the field. If the contractor perceives that a conflict between the utilities and the traffic signal will occur, the Contractor shall notify the Project Engineer immediately so that the conflict may be resolved.

## EQUIPMENT LIST

## A. EQUIPMENT TO BE SUPPLIED BY MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION AND INSTALLED BY THE CONTRACTOR.

ITEM NO.	DESCRIPTION	QUANTITY
8087	R10-4(1) Pedestrian education sign, (9" x 12") pole mounted. Top section of sign to be left blank.	1 Each
8088	D3-2 "Great Seneca HWY" sign (variable x 18") mast arm mounted.	2 Each
8088	D3-2 "Muddy Branch RD" sign (variable x 18") mast arm mounted.	2 Each
8088	R3-5L "LEFT TURN ONLY" sign, (30" x 36") mast arm mounted.	5 Each
8103	27' steel pole with a 70' mast arm. (Note: Anchor bolts will be 2" x 90".)	1 Each
8103	27' steel pole with a 70' (cut to 64') mast arm. (Note: Anchor bolts will be 2" x 90".)	2 Each
8103	27' steel pole with a 60' mast arm. (Note: Anchor bolts will be 2" x 90".)	1 Each
8106	10' breakaway pedestal pole with transformer base.	1 Each
8122	12", one-way, three-section (R,Y,G) traffic signal head with adjustable bracket for mast arm mounting and tunnel visors.	8 Each
8122	12", one-way, three-section (R,Y,G,A) traffic signal head with adjustable bracket for mast arm mounting and tunnel visors.	9 Each
8124	12", one-way, two-section (D,W,W) symbolic pedestrian signal head with adjustable bracket for pole mounting and outway visors.	7 Each
8124	12", one-way, two-section (D,W,W) symbolic pedestrian signal head having proper post top adapter for pedestal mounting and outway visors.	1 Each
8126	Pedestrian pushbutton and pedestrian education R10-4(1) sign. (Note: Sign to read "PUSH BUTTON TO CROSS GREAT SENECA HWY")	4 Each
8128	Splice cabinet with telemetry equipment, pole mounted.	1 Each
8129	Eight-phase, full-traffic-actuated, solid state digital controller with L.A.U., L.A.U. Panel and housed in a NEMA size "6" base-mounted cabinet.	1 Each
NEG.	Video detector camera w/ coaxial cable (to be installed by County Forces)	4 Each
NEG.	GUIDE SHIELD ASSEMBLY (48"x75") pole mounted. M3-4 "NORTH"(30"x15") M1-5 "MD 119"(48"x36") M6-1 "left arrow"(30"x24")	1 Each
NEG.	GUIDE SHIELD ASSEMBLY (30"x51") pole mounted. M3-3 "SOUTH"(24"x12") M1-5 "MD 119"(30"x24") M6-1 "right arrow"(21"x15")	1 Each
NEG.	GUIDE SHIELD ASSEMBLY (48"x75") pole mounted. M3-3 "SOUTH"(30"x15") M1-5 "MD 119"(48"x36") M6-1 "left arrow"(30"x24")	1 Each
NEG.	GUIDE SHIELD ASSEMBLY (30"x51") pole mounted. M3-4 "NORTH"(24"x12") M1-5 "MD 119"(30"x24") M6-1 "right arrow"(21"x15")	1 Each

The contact persons for District #3 (Montgomery County) are as follows:

Mr. Lee Starkloff  
Assistant District Engineer - Traffic  
Phone: (301) 513-7318

Mr. Raleigh Medley  
Assistant District Engineer - Maintenance  
Phone: (301) 513-7304

Mr. Augie Rebish  
District Engineer - Utility  
Phone: (301) 513-7350

Mr. Richard L. Daff, Sr.  
Chief, Traffic Operations Division  
Phone: (410) 787-7630

## EQUIPMENT LIST (CONT.)

## B. EQUIPMENT TO BE FURNISHED AND INSTALLED BY THE CONTRACTOR.

ITEM NO.	DESCRIPTION	QUANTITY
2002	Test pit excavation.	6 C.Y.
5016	4" concrete sidewalk, mix No. 2.	120 S.F.
5022	Remove sidewalk.	120 S.F.
8001	Concrete foundation.	23 C.Y.
8023	3" polyvinyl chloride electrical conduit (Schedule 80) (trenched).	1200 L.F.
8027	4" polyvinyl chloride electrical conduit (Schedule 80) (trenched).	80 L.F.
8028	4" polyvinyl chloride electrical conduit (Schedule 80) (pushed). (To be bored).	1265 L.F.
8041	Control and distribution equipment.	1 Each
8043	Ground rod, 3/4" diameter x 10' length with clamp.	5 Each
8052	12-pair telemetry cable - jelly-filled (underground).	185 L.F.
8063	Canoga 4-conductor electrical cable (No. 14 A.W.G.) (shielded).	1135 L.F.
8064	2-conductor electrical cable (No. 14 A.W.G.).	760 L.F.
8065	3-conductor electrical cable (No. 14 A.W.G.).	220 L.F.
8066	5-conductor electrical cable (No. 14 A.W.G.).	4450 L.F.
8070	2-conductor electrical cable (No. 12 A.W.G.) copper type TC.	470 L.F.
8075	1-conductor electrical cable (No. 6 A.W.G.) stranded bare copper ground wire.	775 L.F.
8095	20' lighting arm.	2 Each
8097	250W-HPS luminaire.	2 Each
8109	3" weatherhead.	1 Each
8131	Traffic signal handbox (pullbox).	14 Each
8139	Cut mast arm to needed length.	2 Each
8148	Removal and salvage of signs less than 50 S.F.	5 Each
8152	Removal of electrical service.	1 Each
8153	Removal of span and associated wiring.	4 Each
8156	Removal and salvage of strain pole including foundation.	4 Each
8159	Removal and salvage of cabinet, base-mounted.	1 Each
8161	Removal of handbox.	13 Each
8162	Removal and salvage of traffic signal head.	14 Each
8162	Removal and salvage of pedestrian signal	6 Each
9001	Signal technician labor to reroute existing underground interconnect cable and removal of lighting arm and video detector cameras.	12 HRS

## SEQUENCE OF OPERATION SHEET

MD 119 (GREAT SENECA HWY)  
RUNS IN AN  
NORTH-SOUTH  
DIRECTION

TRAFFIC OPERATIONS SECTION  
DIVISION OF TRAFFIC ENGINEERING  
MONTGOMERY COUNTY, MARYLAND

MD 119 (GREAT SENECA HIGHWAY) AT  
MUDDY BRANCH ROAD

NO. \_\_\_\_\_

## INTERSECTION:

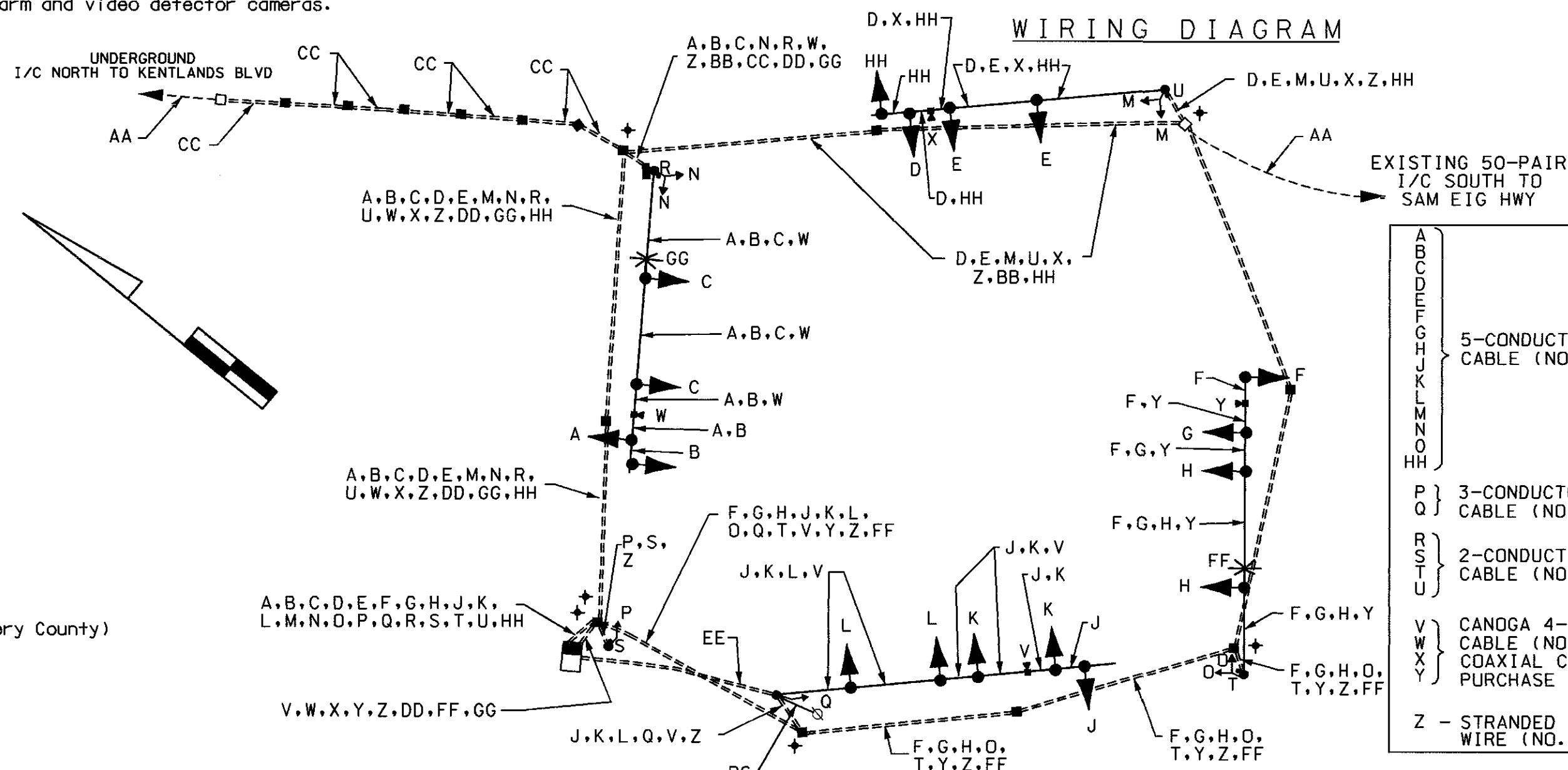
SIGNAL NO.	SIGNAL HEAD INDICATIONS			
	1,2,5,6,9,10,13,14		3,4,7,8,11,12,15,16	17-20
TOTAL:	8		8	6
LEGEND				
OPTICALLY LIMITED				
R RED				
Y YELLOW				
G GREEN				
ARROW				
FLASHING				

## SEQUENCE OF OPERATION

SIGNAL NO.	INTERVAL																											
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
1	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR
2	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR
3	CG	Y	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R
4	G	G	Y	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R
5	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR
6	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR
7	G	G	Y	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R
8	G	G	Y	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R
9	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR
10	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR
11	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R
12	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R
13	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR
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15	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR	RR
16	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R
17	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R
18	WK	FL	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW
19	WK	FL	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW
20	WK	FL	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW
21	WK	FL	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW
22	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW
23	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW
24	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW
25	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW
PHASE	2 & 6	ALL RED	3 & 7	ALL RED	3 & 8	ALL RED	4 & 7	ALL RED	4 & 8	ALL RED	1 & 5	ALL RED	1 & 6	ALL RED	2 & 5	ALL RED												

## NOTES:

SUBMITTED: \_\_\_\_\_ CHECKED: \_\_\_\_\_ APPROVED: \_\_\_\_\_  
IN SERVICE BY: \_\_\_\_\_ DATE: \_\_\_\_\_ TIME: \_\_\_\_\_



## WIRING KEY

- AA - EXISTING 50-PAIR VOICE GRADE INTERCONNECT CABLE  
BB - REROUTED 50-PAIR VOICE GRADE INTERCONNECT CABLE  
CC - 12-PAIR VOICE GRADE INTERCONNECT CABLE (JELLY FILLED)  
DD - 3-CONDUCTOR ELECTRICAL CABLE (NO. 4 A.W.G.)  
EE - 2-CONDUCTOR TRAY CABLE (NO. 12 A.W.G.)  
FF - PROPOSED OVERHEAD SERVICE TO BE INSTALLED BY PEPCO  
+ - GROUND ROD  
Z - STRANDED BARE COPPER GROUND WIRE (NO. 6 A.W.G.)

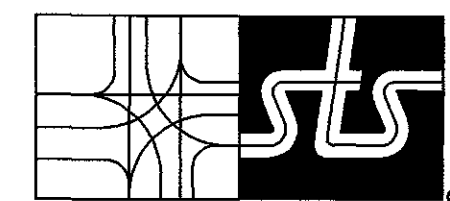


MARYLAND DOT - STATE HIGHWAY ADMINISTRATION  
Office of Traffic & Safety

TRAFFIC ENGINEERING DESIGN DIVISION

MD 119 (GREAT SENECA HWY) AT  
MUDDY BRANCH ROAD

DRAWN BY: ROB CICCHINI	F.A.P. NO. _____	TS NO. 4207A	SHEET NO. 3 OF 3
CHECKED BY: R ZACHERL	S.H.A. NO. _____	T.I.M.S. NO. F531	
SCALE: N/A	COUNTY: MONTGOMERY		
DATE: 9/30/02	LOG MILE: 15011900.80		



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